Industry/TSTF Standard Technical Specification Change Traveler

Exempt SRs on LTOP equipment not used to satisfy the LCO

Classification: 1) Correct Specifications

NUREGs Affected: ☑ 1430 ☑ 1431 ☑ 1432 ☐ 1433 ☐ 1434

Description:

The ITS SR which verifies the RCS vent is open was modified to only require the verification if the vent is being used to satisfy the requirements of the LCO. To support this change, Notes to the SRs were deleted.

Additionally, a Note to NUREG-1432 SR 3.4.12.3 was deleted, and two editorial changes were made to NUREG-1431.

Justification:

The ITS possess a SR which verifies that the RCS vent is open. This SR is revised to only require the verification of the vent when it is being used to comply with the requirements of the LCO. To support this change, Notes to NUREG-1430 SR 3.4.12.6 and NUREG-1431 SR 3.4.12.5 were deleted. These changes are acceptable, because the LCO provides several methods for providing pressure relief. Any of the methods may be used.

Additionally, NUREG-1432 SR 3.4.12.3 requires the verification that each SIT is isolated. This SR is modified by a Note which states that this is only required to be performed when complying with LCO 3.4.12b. This Note was deleted. This change is acceptable, because the Note modifies the wrong SR. LCO 3.4.12b provides the requirements for the RCS vent. Thus, the Note should have been located in the SR for verifying the RCS vent. This Note is no longer necessary, because the applicable SR was modified to only require verification of the RCS vent when it is being used to comply with the requirements of the LCO (see above).

In addition, an editorial change is made to NUREG-1431 to clarify the LCO.

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Revision History

OG Revision 0 Revision Status: Closed

Revision Proposed by: Byron/Braidwood

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 19-Nov-96

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 14-Jan-97

TSTF Review Information

TSTF Received Date: 20-Jan-97 Date Distributed for Review 08-Apr-97

OG Review Completed: ☐ BWOG ☑ WOG ☐ CEOG ☐ BWROG

TSTF Comments:

OG Revision 0 Revision Status: Closed

CEOG Comments from 4/24/97: SR 3.4.12.5 part applicable to CEOG. Accept.

Superseded by Revision 1.

TSTF Resolution: Superceeded Date: 19-Aug-97

OG Revision 1 Revision Status: Closed

Revision Proposed by: WOG

Revision Description:
Eliminated Note on SR 3.4.12.5.

Owners Group Review Information

Date Originated by OG: 19-Aug-97

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 19-Aug-97

TSTF Review Information

TSTF Received Date: 19-Aug-97 Date Distributed for Review 06-Jan-98

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:

2/5/98 - Deletion of note on SR 3.4.12.5 and addition of required is applicable to B&W and CE. Delete CEOG note on SR for SIT. Change to justification regarding met vs performed.

TSTF Resolution: Approved Date: 05-Feb-98

NRC Review Information

NRC Received Date: 29-May-98

NRC Comments:

1/13/99 - Referred to SRXB and EMCB
4/21/99 - NRC comments: The staff accepts the proposed changes except for the change in the note in the SR for performing a COT on each required PORV. This change would modify the wording of the note to "not required to be performed until 12 hours after..." instead of the current wording of "not required to be met until 12 hours after. . ." This is a "met vs performed" issue, which will not be resolved in the near future.

Final Resolution: Superceded by Revision Final Resolution Date: 21-Apr-99

TSTF Revision 1 Revision Status: Active Next Action: NRC

Revision Proposed by: NRC

Revision Description:
At the NRC's request, the "met vs. performed" change to WOG SR 3.4.12.8 was removed from this Traveler.

TSTF Review Information

TSTF Received Date: 15-Jun-99 Date Distributed for Review 15-Jun-99

TSTF Revision 1 **Revision Status: Active** **Next Action: NRC**

OG Review Completed: ✓ BWOG ✓ WOG ✓ CEOG ✓ BWROG

TSTF Comments:
(No Comments)

TSTF Resolution: Approved Date: 15-Jun-99

NRC Review Information

NRC Received Date: 16-Jun-99

NRC Comments:
(No Comments)

Final Resolution: NRC Action Pending Final Resolution Date:

Incorporation Into the NUREGs

File to BBS/LAN Date: TSTF Informed Date: TSTF Approved Date:

NUREG Rev Incorporated:

Affected Technical Specifications

SR 3.4.12.6	LTOP System	NUREG(s)- 1430 Only
SR 3.4.12.6 Bases	LTOP System	NUREG(s)- 1430 Only
LCO 3.4.12	LTOP System	NUREG(s)- 1431 Only
LCO 3.4.12 Bases	LTOP System	NUREG(s)- 1431 Only
SR 3.4.12.5	LTOP System	NUREG(s)- 1431 Only
SR 3.4.12.5 Bases	LTOP System	NUREG(s)- 1431 Only
SR 3.4.12.3	LTOP System	NUREG(s)- 1432 Only
SR 3.4.12.4	LTOP System	NUREG(s)- 1432 Only
SR 3.4.12.4 Bases	LTOP System	NUREG(s)- 1432 Only

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SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.12.4	Verify pressurizer level is ≤ [22] inches.	30 minutes during RCS heatup and cooldown AND 12 hours
SR 3.4.12.5	Verify PORV block valve is open.	12 hours
SR 3.4.12.6	----------NOTE---------- Only required when complying with LCO 3.4.12.b. Verify RCS vent ≥ [0.75] square inch is open. (required)	12 hours for unlocked open vent valve(s) AND 31 days for locked open vent valve(s)
SR 3.4.12.7	Perform CHANNEL FUNCTIONAL TEST for PORV.	Within [12] hours after decreasing RCS temperature to ≤ [283]°F AND 31 days thereafter

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SURVEILLANCE REQUIREMENTS

SR 3.4.12.4 (continued)

variations. This Frequency may be discontinued when the ends of these conditions are satisfied, as defined in plant procedures. Thereafter, the Surveillance is required at 12 hour intervals.

These Frequencies are shown by operating practice sufficient to regularly assess indications of potential degradation and verify operation within the safety analysis.

SR 3.4.12.5

Verification that the PORV block valve is open ensures a flow path to the PORV. This is required at 12 hour intervals.

The interval has been shown by operating practice sufficient to regularly assess conditions for potential degradation and verify operation is within the safety analysis.

SR 3.4.12.6

When stipulated by LCO 3.4.12.b, the RCS vent of at least [0.75] square inches must be verified open for relief protection. For a vent valve not locked open, the Frequency is every 12 hours. For a valve locked open, the required Frequency is every 31 days.

Only if the vent is being used to satisfy the requirements of this LCO

Again, the Frequency intervals consider operating practice to determine adequacy to regularly assess conditions for potential degradation and verify operation within the safety analysis.

A Note modifies the SR by requiring the Surveillance when complying with LCO 3.4.12.b.

SR 3.4.12.7

A CHANNEL FUNCTIONAL TEST is required within [12] hours after decreasing RCS temperature to ≤ [283]°F and every 31 days thereafter to ensure the setpoint is proper for

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3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.12 Low Temperature Overpressure Protection (LTOP) System

LCO 3.4.12 An LTOP System shall be OPERABLE with a maximum of [one] [high pressure injection (HPI)] pump [and one charging pump] capable of injecting into the RCS and the accumulators isolated and either a or b below.

one of the following pressure relief capabilities:

a. Two RCS relief valves, as follows:

editorial change

1. Two power operated relief valves (PORVs) with lift settings within the limits specified in the PTLR, or

2. [Two residual heat removal (RHR) suction relief valves with setpoints ≥ [436.5] psig and ≤ [463.5] psig, or]

3. [One PORV with a lift setting within the limits specified in the PTLR and one RHR suction relief valve with a setpoint ≥ [436.5] psig and ≤ [463.5] psig, or]

b. The RCS depressurized and an RCS vent of ≥ [2.07] square inches.

APPLICABILITY: MODE 4 when all RCS cold leg temperature is ≤ [275]°F,
MODE 5,
MODE 6 when the reactor vessel head is on.

----------NOTE----------
Accumulator isolation is only required when accumulator pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed by the P/T limit curves provided in the PTLR.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.12.4	Verify RHR suction valve is open for each required RHR suction relief valve.	12 hours
SR 3.4.12.5	----------NOTE---------- Only required to be performed when complying with LCO 3.4.12.b. ----------	
	Verify required RCS vent ≥ [2.07] square inches open.	12 hours for unlocked open vent valve(s) AND 31 days for locked open vent valve(s)
SR 3.4.12.6	Verify PORV block valve is open for each required PORV.	72 hours
SR 3.4.12.7	Verify associated RHR suction isolation valve is locked open with operator power removed for each required RHR suction relief valve.	31 days
SR 3.4.12.8	----------NOTE---------- Not required to be met until 12 hours after decreasing RCS cold leg temperature to ≤ [275]°F. ----------	
	Perform a COT on each required PORV, excluding actuation.	31 days

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APPLICABLE SAFETY ANALYSES

RCS Vent Performance (continued)

The LTOP System satisfies Criterion 2 of the NRC Policy Statement.

LCO

This LCO requires that the LTOP System is OPERABLE. The LTOP System is OPERABLE when the minimum coolant input and pressure relief capabilities are OPERABLE. Violation of this LCO could lead to the loss of low temperature overpressure mitigation and violation of the Reference 1 limits as a result of an operational transient.

To limit the coolant input capability, the LCO requires [one] [HPI] pump [and one charging pump] capable of injecting into the RCS and all accumulator discharge isolation valves closed and immobilized. When accumulator pressure is greater than or equal to the maximum RCS pressure for the existing RCS cold leg temperature allowed in the PTLR.

The elements of the LCO that provide low temperature overpressure mitigation through pressure relief are:

a. ~~Two RCS relief valves, as follows:~~

@ Two OPERABLE PORVs; or

A PORV is OPERABLE for LTOP when its block valve is open, its lift setpoint is set to the limit required by the PTLR and testing proves its ability to open at this setpoint, and motive power is available to the two valves and their control circuits.

[b. Two OPERABLE RHR suction relief valves; or]

[An RHR suction relief valve is OPERABLE for LTOP when its RHR suction isolation valve and its RHR suction valve are open, its setpoint is at or between [436.5] psig and [463.5] psig, and testing has proven its ability to open at this setpoint.]

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LCO (continued)

[c. One OPERABLE PORV and one OPERABLE RHR suction relief valve; or]

d. A depressurized RCS and an RCS vent.

An RCS vent is OPERABLE when open with an area of ≥ [2.07] square inches.

Each of these methods of overpressure prevention is capable of mitigating the limiting LTOP transient.

APPLICABILITY

This LCO is applicable in MODE 4 when any RCS cold leg temperature is ≤ [275]°F, in MODE 5, and in MODE 6 when the reactor vessel head is on. The pressurizer safety valves provide overpressure protection that meets the Reference 1 P/T limits above [275]°F. When the reactor vessel head is off, overpressurization cannot occur.

LCO 3.4.3 provides the operational P/T limits for all MODES. LCO 3.4.10, "Pressurizer Safety Valves," requires the OPERABILITY of the pressurizer safety valves that provide overpressure protection during MODES 1, 2, and 3, and MODE 4 above [275]°F.

Low temperature overpressure prevention is most critical during shutdown when the RCS is water solid, and a mass or heat input transient can cause a very rapid increase in RCS pressure when little or no time allows operator action to mitigate the event.

The Applicability is modified by a Note stating that accumulator isolation is only required when the accumulator pressure is more than or at the maximum RCS pressure for the existing temperature, as allowed by the P/T limit curves. This Note permits the accumulator discharge isolation valve Surveillance to be performed only under these pressure and temperature conditions.

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SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.4.12.3	----------NOTE---------- Required to be performed when complying with LCO 3.4.12b. ---------- Verify each SIT is isolated.	12 hours
SR 3.4.12.4	Verify RCS vent ≥ [1.3] square inches is open. (required)	12 hours for unlocked open vent valve(s) AND 31 days for locked open vent valve(s)
SR 3.4.12.5	Verify PORV block valve is open for each required PORV.	72 hours
SR 3.4.12.6	----------NOTE---------- Not required to be performed until [12] hours after decreasing RCS cold leg temperature to ≤ [285]°F. ---------- Perform CHANNEL FUNCTIONAL TEST on each required PORV, excluding actuation.	31 days
SR 3.4.12.7	Perform CHANNEL CALIBRATION on each required PORV actuation channel.	[18] months

SURVEILLANCE REQUIREMENTS

SR 3.4.12.1, SR 3.4.12.2, and SR 3.4.12.3 (continued)

of injecting into the RCS through removing the power from the pumps by racking the breakers out under administrative control. An alternate method of LTOP control may be employed using at least two independent means to prevent a pump start such that a single failure or single action will not result in an injection into the RCS. This may be accomplished through the pump control switch being placed in [pull to lock] and at least one valve in the discharge flow path being closed.

The 12 hour interval considers operating practice to regularly assess potential degradation and to verify operation within the safety analysis.

SR 3.4.12.4

required

SR 3.4.12.4 requires verifying that the RCS vent is open ≥ [1.3] square inches is proven OPERABLE by verifying its open condition either:

a. Once every 12 hours for a valve that is unlocked open; or

b. Once every 31 days for a valve that is locked open.

The passive vent arrangement must only be open to be OPERABLE. This Surveillance need only be performed if the vent is being used to satisfy the requirements of this LCO. The Frequencies consider operating experience with mispositioning of unlocked and locked vent valves, respectively.

SR 3.4.12.5

The PORV block valve must be verified open every 72 hours to provide the flow path for each required PORV to perform its function when actuated. The valve can be remotely verified open in the main control room.

The block valve is a remotely controlled, motor operated valve. The power to the valve motor operator is not required to be removed, and the manual actuator is not required

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SURVEILLANCE REQUIREMENTS

SR 3.4.12.4 (continued)

The RHR suction valve is verified to be opened every 12 hours. The Frequency is considered adequate in view of other administrative controls such as valve status indications available to the operator in the control room that verify the RHR suction valve remains open.

The ASME Code, Section XI (Ref. 8), test per Inservice Testing Program verifies OPERABILITY by proving proper relief valve mechanical motion and by measuring and, if required, adjusting the lift setpoint.

SR 3.4.12.5

The RCS vent of ≥ [2.07] square inches is proven OPERABLE by verifying its open condition either:

a. Once every 12 hours for a valve that cannot be locked.

b. Once every 31 days for a valve that is locked, sealed, or secured in position. A removed pressurizer safety valve fits this category.

{When required

The passive vent arrangement must only be open to be OPERABLE. This Surveillance is required ~~to be performed~~ if the vent is being used to satisfy the pressure relief requirements of the LCO 3.4.12 ~~b.~~ d.

SR 3.4.12.6

The PORV block valve must be verified open every 72 hours to provide the flow path for each required PORV to perform its function when actuated. The valve must be remotely verified open in the main control room. [This Surveillance is performed if the PORV satisfies the LCO.]

The block valve is a remotely controlled, motor operated valve. The power to the valve operator is not required removed, and the manual operator is not required locked in the inactive position. Thus, the block valve can be closed in the event the PORV develops excessive leakage or does not close (sticks open) after relieving an overpressure situation.

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